REMARKS

The Office Action dated March 21, 2007 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 34, 45, 46, 52, 54, 58, 60, 63, 67 and 71 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added, and no new issues are raised which require further consideration and/or search. Claims 45-47 have been allowed. Claims 34-44 and 48-71 are submitted for consideration.

Claims 34-63 and 67-71 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,274,813 to Jamal (hereinafter). The rejection is traversed as being based on a reference that neither teach nor suggest the novel combination of features clearly recited in claims 34-63 and 67-71.

Claim 34, upon which claims 35-51 depend, recites a method including transmitting from a base transceiver station of a mobile communication network to a plurality of mobile stations of the mobile communication network, a parameter defining allowed access slots of a physically existing random access channel. The method also includes receiving the parameter at a mobile station and determining, at the mobile station, the allowed access slots of the physically existing random access channel based on the parameter and using, at the mobile station, at least one of the determined allowed access slots of the physically existing random access channel for initiating a random access operation to the base transceiver station.

Claim 52, upon which claim 53 depend, recites a system for performing random access in a mobile communication network. The system includes a base transceiver station arranged for transmitting a parameter defining allowed access slots of a physically existing random access channel. The system also includes a plurality of mobile stations arranged for receiving the parameter, for determining the allowed access slots of the physically existing random access channel based on the parameter, and for using at least one of the determined allowed access slots of the physically existing random access channel for initiating a random access operation to a base transceiver station.

Claim 54, upon which claims 55-57 depend recites a network element for a mobile communication network including a plurality of mobile stations. The network element includes setting means for setting a parameter defining allowed access slots of a physically existing random access channel, via which allowed access slots of the physically existing random access channel a random access operator to the network element is to be initiated, and transmitting means for transmitting the parameter to the plurality of mobile stations.

Claim 58, upon which claims 58-66 depend, recites a mobile station for a mobile communication network having at least one network element for allowing a random access operation. The mobile station includes a receiving unit configured to receive from the network element a parameter defining allowed access slots of a physically existing random access channel for the random access operation and a determining unit configured to determine the allowed access slots of the physically existing random access

channel based on the parameter received from the network element. The mobile station also includes a transmitting unit configured to initiate transmission of a random access message to the network element using at least one of the determined allowed access slots of the physically existing random access channel.

Claim 67 recites a method including receiving a parameter defining allowed access slots of a physically existing random access channel for a random access operation in a mobile communication network and determining the allowed access slots of the physically existing random access channel based on the parameter. The method also includes initiating transmission of a random access message using at least one of the determined allowed access slots of the physically existing random access channel.

Claim 68 recites a method including receiving information about a set of available uplink access slots of a random access channel in a mobile communication network and deriving available uplink access slots, in a next full access slot set, for the set of available uplink access slots. The method also includes randomly selecting one access slot among the available uplink access slots for initiating a random access procedure.

Claim 69 recites a method including receiving a set of available random access channel sub-channels, a random access channel sub-channel in a mobile communication network defining a sub-set of a total set of uplink access slots. The method also includes deriving available uplink access slots, in a next full access slot set, for the set of available random access channel sub-channels and randomly selecting one access slot among the available uplink access slots for initiating a random access procedure.

Claim 70 recites a method including receiving an access parameter message sent on a broadcast channel in a mobile communication network, the access parameter message defining allowed transmission slots in which random access channel transmissions are limited to occur, wherein the allowed transmission slots are dictated by slot offset and slot duration parameters. The method also includes calculating an allowed transmission slot based on the slot offset and slot duration parameters and initiating transmission of a random access message using the allowed transmission slot.

Claim 71 recites an apparatus including receiving means for receiving from a network element a parameter defining allowed access slots of a physically existing random access channel for a random access operation. The apparatus also includes determining means for determining said allowed access slots of the physically existing random access channel based on said parameter received from said network element and transmitting means for initiating transmission of a random access message to said network element using at least one of said determined allowed access slots of the physically existing random access channel.

As will be discussed below, the cited prior art reference of Jamal fails to disclose or suggest the elements of any of the presently pending claims.

Jamal teaches a connection-oriented external core network and a connectionless-oriented external core network that are coupled to corresponding service nodes each of which connects to a radio access network. Col. 4, lines 30-55. Radio access is based upon wideband Code Division Multiple Access (WCDMA) with individual radio

channels allocated using CDMA spreading codes. Col. 4, lines 56-59. In the CDMA cellular telephone system, each base station cell transmits a synchronization signal to aid downlink acquisition and also transmits a Broadcast Control Channel (BCCH) which indicates system and cell overhead information. The synchronization signal is used by the mobile system to obtain initial system synchronization signal and to provide time, frequency and phase tracking ob the base station transmitted signals. The BCCH also includes information about how to communicate with the system via common channels. Col. 6, lines 5 – 22.

In Jamal, if a mobile station wants to contact the network, or vice versa, such contact occurs initially over a common channel. Typical common channels in the downlink direction include a paging channel and a forward access channel. In the uplink direction, a random access channel (RACH) is the typical common channel. Dedicated traffic channels or connections are assigned using the RACH which is usually synchronized to the BCCH. When a mobile station registers with the network, performs a cell-location update, processes an order, sends small or infrequent data bursts, makes an origination, responds tot a page, or responds to an authentication challenge, it typically uses the RACH. Therefore, the parameters contained in the BCCH transmitted by the base station and received by the mobile station and the parameters transmitted to the based station on the RACH all have a direct function. Jamal uses one or more of those parameters to dynamically allocate an uplink scrambling code to an uplink, dedicated traffic connection associated with the mobile station. Col. 6, lines 23 - 50.

The dynamic resource allocation allocates communication resources implicitly. Rather than sending separate control signals to explicitly identify the allocated resource between the mobile station and the base station, both the mobile station and the base station use information known to them to determine an allocated communications resource. Col. 6, lines 51-65. Signaling or control procedures that must be performed by the mobile station and base station to effect communication via a cellular radio communications system do not specifically identify a communication resource. Instead the mobile station and the base station may acquire implicitly known parameters, at least one of which is more or less unique to the mobile station. Using this information, the mobile station and the base station determine a communications resource which can be used for dedicated traffic communication. Col. 7, lines 1 – 34.

In case the setup of a dedicated channel resource is required, the mobile station makes a request for a traffic channel over an uplink common control channel, such as a RACH. In this request, the mobile station provides information to the base station that is specific to the mobile station and specific to this particular access. For example, the specific time or time slot at which the access is made and/or specific information conveyed for that access, such as an access reference or signature. Depending on a specific scrambling code selection, generation or determination procedure, both the mobile station and the base station use one ore more of the mobile-specific access parameters and the stored overhead type parameters to generate the uplink scrambling code allocated to the traffic connection dedicated to the mobile station which is thereafter

used to scramble and descramble communications over that connection. Col. 7, line 54 – Col. 8, line 6.

Applicant submits that Jamal does not teach or suggest the elements recited in any of the present pending claims. Each of the pending claims, in part, recite **determining**, at the mobile station, the allowed access slots of the physically existing random access channel based on the parameter and using, at the mobile station, at least one of the determined allowed access slots of the physically existing random access channel for initiating a random access operation to the base transceiver station. Applicant submits that Jamal does not teach or suggest an initiation of a random access operation from a mobile station to a base station based on a parameter transmitted from the base station. In Jamal, there is no interrelation between the parameter sent from the base station to the mobile station and initiating of a random access operation by the mobile station. Furthermore, Jamal does not teach or suggest access slots of a physically existing random access channel. According to the claimed invention, capacity of a single random access channel can be used as efficiently as possible.

In the "Response to Arguments" Section, the Office Action alleged that Col. 6, lines 34-50 of Jamal discloses that the mobile station 30 of figure 1 uses an uplink channel RACH to initiate transmission of data to a base station based on the parameter contained in the BCCH received from the base station. The Office Action further cites Col. 7, line 57-Col. 8, line 6 and Col. 8, lines 48-57 of Jamal as teaching this feature. Applicant submits that Col. 6, lines 34-50 of Jamal discloses that typically dedicated

traffic channels or connections are assigned using the RACH which is usually synchronized with the BCCH. Col. 6, lines 34-50 of Jamal further discloses that whenever a mobile station registers with the network, performs a cell location update, processes an order, sends small or infrequent data bursts, makes an origination, responds to a page, or responds to an authentication challenge, it typically uses the RACH. Applicant further submits that Col. 7, line 57-Col. 8, line 6 of Jamal discloses that if a mobile station makes a request for a traffic channel over an uplink common control channel, such as a random access channel, the mobile station provides information to the base station that is specific to the mobile station and to the particular access being made by the mobile station. Col. 7, line 57-Col. 8, line 6 of Jamal further discloses that depending upon the specific scrambling code selection, generation, or determination procedure employed, both the mobile station and the base station use one or more of the mobile-specific access parameters and the stored overhead type parameters to generate the uplink scrambling code allocated to the traffic connection dedicated to the mobile station which is thereafter used to scramble and descramble communications over that connection. Applicant also submits that Col. 8, lines 48-57 of Jamal discloses that each random access slot may include the identification of the mobile station and other parameters such as a particular signature selected by the mobile station from a limited set of signatures used to further decrease the probability of collision on the access channel. According to this section of Jamal, even if a plurality of mobile stations select the same access slot, they can be individually resolved at the base station if they have chosen

different signatures. Also according to this section of Jamal, the access slot and signature for the uplink common control channel frame transmission are typically selected pseudo-randomly by the mobile station.

Therefore, Applicant submits that the cited passages of Jamal merely discloses that parameters are transmitted from the base station to a mobile station and that data are transmitted from the mobile station to the base station on a random access channel. There is no interrelation in the cited sections of Jamal of a parameter sent from the base station to the mobile station which is used for initiating a random access operation by the mobile station. There is also no teaching or suggestion in Jamal of **determining**, at the mobile station, the allowed access slots of the physically existing random access channel based on the parameter and using, at the mobile station, at least one of the determined allowed access slots of the physically existing random access channel for initiating a random access operation to the base transceiver station. Hence, Applicant submits that Jamal does not teach or suggest an initiation of a random access operation from a mobile station to a base station based on a parameter transmitted from the base station, as recited in the presently pending claims. In light of the discussion above, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Jamal simply does not teach or suggest each feature of claims 34, 52, 54, 58 and 67-71 and hence, dependent claims 35-51, 53, 55-57 and 59-66 thereon.

Claims 64-66 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Jamal in view of U.S. Patent No. 6,643,275 B1 (Gustafsson). According to the Office

Action Jamal teaches all of the elements of claims 64-66 except that Jamal does not explicitly disclosed wherein consecutive preambles are transmitted a predetermined number of access slots apart. Thus, the Office Action combined the teachings of Gustafsson and Jamal to yield all of the elements of claims 64-66. The rejection is traversed as being based on references that neither teach nor suggest the novel combination of features clearly recited in independent claim 58, upon which claims 64-66 depend.

Claim 58 has been discussed above. Gustafsson discloses an uplink common physical channel frame structures with a separate preamble and data portion. The preamble is used by a base station to detect that a mobile station is attempting a random request. The data portion of the channel includes user data and pilot symbols that provide energy for channel estimation during reception of the data portion. See at least the Abstract.

Gustafsson does not cure the deficiencies of Jamal as discussed above with regard to claim 58. Specifically, Gustafsson does not teach or suggest receiving the parameter at a mobile station and **determining**, at the mobile station, the allowed access slots of the physically existing random access channel based on the parameter and using, at the mobile station, at least one of the determined allowed access slots of the physically existing random access channel for initiating a random access operation to the base transceiver station, as recited in claim 58. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because neither Jamal nor

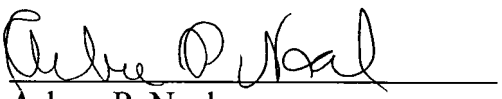
Gustafsson, whether taken singly or combined, teaches or suggests each feature of claim 58 and hence, dependent claims 64-66 thereon.

As noted previously, claims 34-44 and 48-71 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 34-71 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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